

DOCUMENT RESUME

ED 421 297

PS 026 846

TITLE Curriculum Handbook for Parents, 1998-1999. Catholic School Version. Grade 4. Second Edition.

INSTITUTION Alberta Dept. of Education, Edmonton.

ISBN ISBN-0-7732-9903-3

PUB DATE 1998-00-00

NOTE 38p.; The Alberta Education "Curriculum Handbooks for Parents" series is published periodically in new editions, one for each grade/academic level, usually with only slight changes from the prior edition. There are two smaller series, one set for public schools and one set for Catholic schools. For the 1997 series, see ED 410 040-049. For the 1998 series, see PS 026 832-852.

AVAILABLE FROM Learning Resources Distributing Centre, 12360-142 Street, Edmonton, Alberta, Canada, T5L 4X9; phone: 403-427-5775; World Wide Web: <http://ednet.edc.gov.ab.ca>

PUB TYPE Guides - Non-Classroom (055)

EDRS PRICE MF01/PC02 Plus Postage.

DESCRIPTORS Art Education; *Catholic Schools; *Educational Objectives; Elementary Education; *Elementary School Curriculum; *Elementary School Students; Fine Arts; Foreign Countries; *Grade 4; Health Education; Intermediate Grades; Language Arts; Mathematics Curriculum; Outcomes of Education; Parent Participation; Physical Education; Religious Education; Science Curriculum; Second Language Instruction; Social Studies; Technology Education

IDENTIFIERS Alberta

ABSTRACT

Parental involvement is critical to a child's success in school. This handbook provides parents with information about the Grade 4 curriculum in Catholic schools in Alberta, Canada. Based on the Alberta Education "Program of Studies: Elementary Schools," the handbook describes the knowledge, skills, and attitudes Catholic school students in Alberta are expected to demonstrate when they have completed the Grade 4 curriculum, including samples of what students are expected to learn in each subject. Following introductory material, sections include: (1) "What Is Curriculum?"; (2) "Religious Education"; (3) "Language Arts"; (4) "Mathematics"; (5) "Science"; (6) "Social Studies"; (7) "Learner Outcomes in Technology"; (8) "Physical Education"; (9) "Health"; (10) "Fine Arts"; and (11) "Languages Other Than English." The handbook concludes with a one-page questionnaire asking for feedback on the handbook. (LPP)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

✖ This document has been reproduced as
received from the person or organization
originating it.

□ Minor changes have been made to
improve reproduction quality.

• Points of view or opinions stated in this
document do not necessarily represent
official OERI position or policy.

Curriculum Handbook *for* Parents

1998–1999

Catholic School Version

GRADE

FOUR



PERMISSION TO REPRODUCE AND
DISSEMINATE THIS MATERIAL HAS
BEEN GRANTED BY

C. Andrews

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)

1

Alberta
EDUCATION

026846



ERIC
Full Text Provided by ERIC

ALBERTA EDUCATION CATALOGUING IN PUBLICATION DATA

Alberta. Alberta Education.

Curriculum handbook for parents 1998-1999 : grade 4

URL: <http://ednet.edc.gov.ab.ca>

ISBN 0-7732-9896-7

1. Education—Alberta—Curricula—Handbooks, manuals, etc.

I. Title.

LB1564.C2.A333 1998

375.37

Copyright © 1998, the Crown in Right of Alberta, as represented by the Minister of Education.

Alberta Education, 11160 Jasper Avenue, Edmonton, Alberta, T5K 0L2. All rights reserved.

Additional copies may be purchased from the Learning Resources Distributing Centre,

12360 - 142 Street, Edmonton, Alberta, T5L 4X9, telephone 403-427-5775; or, from one of the Queen's

Printer Bookstores, telephone 403-427-4952, Edmonton; or, telephone 403-297-6251, Calgary.

Outside of Edmonton dial 310-0000 to be connected toll free.

Permission is given by the copyright owner to reproduce this handbook for educational purposes and on a nonprofit basis.

Curriculum Handbook
for **Parents**

1998–1999

Catholic School Version

GRADE 4

Table of *Contents*

Message from the Minister of Education	<i>iii</i>
Letter from Archbishop MacNeil	<i>iv</i>
Introduction to the Grade 4 Handbook	<i>v</i>
Introduction to the Elementary School Curriculum	<i>1</i>
What Is Curriculum?	<i>2</i>
Religious Education	<i>3</i>
Language Arts	<i>7</i>
Mathematics	<i>8</i>
Science	<i>13</i>
Social Studies	<i>16</i>
Learner Outcomes in Technology	<i>18</i>
Physical Education	<i>18</i>
Health	<i>20</i>
Fine Arts	<i>22</i>
Languages Other Than English	<i>24</i>
Feedback	<i>29</i>

Message from the **Minister of Education**



While students are at the centre of the education system, you, as parents are a vital partner. Your involvement in your child's education is critical to his or her success. To be the pathfinder, to help your child, you need to know what s/he is learning and when.

The *Curriculum Handbook for Parents* series is your guide to each stage of learning. It is a clear outline of what we expect our students to learn at each stage of their education. When you know what is expected at school, you can provide the home support students need. By reading about what your student is learning at school and discussing it at home, you do more than learn what is happening at school. You show your child that you value education.

This is the second edition of the handbook series. It reflects suggestions of parents, teachers and other education partners. I would like to thank those people whose comments helped us improve this edition.

I also would like to thank the eight school boards who worked on the development of the original handbooks – Edmonton Public, Edmonton Separate, Elk Island, Sturgeon, St. Albert Protestant, Greater St. Albert Catholic, Sherwood Park Separate and Black Gold.

Gary G. Mar

Gary G. Mar, Q.C.
Minister of Education
M.L.A., Calgary Nose Creek



Office of the Archbishop

8421 - 101ST AVENUE
EDMONTON, ALBERTA
T6A 0L1

PH. (403) 469-1010
FAX. (403) 465-3003

Dear Parents and Guardians:

On behalf of the Catholic Bishops of Alberta, I welcome this opportunity to affirm you in your role as parents in the education of your children and wish to express my appreciation to the Government of Alberta and Alberta Education for this 'Curriculum Handbook for Parents'.

The Church has always recognized with confidence that you, parents, are the first and primary educators of your children, especially with regards to education in the faith. This is a noble, yet, challenging calling that is rightfully yours. Today, therefore, because of the many diverse pressures and influences on our children, your role is vital in working with our schools to continue to provide the best possible education for our children. To those of you who have entrusted your children to a Catholic school, be assured that it is with great respect for these facts that we support you in your role. I encourage you to work closely with our Catholic schools by joining your local school councils or parent groups. Be a strong voice for the Catholic identity of schools. In this regard, you will share in a concrete and invaluable way in the central mission of the Church which is to proclaim Jesus and his Gospel in the world today and, in so doing, hand on our faith to our children.

I commend Alberta Education for providing parents with this practical Curriculum Handbook. It is a clear presentation of what parents can expect of our Alberta schools (Public and Catholic), and by its very existence also acknowledges how important you are as parents in your children's education. In it, you will find a comprehensive presentation of the content and expectations of the Religious Education Program written and approved by the Canadian Conference of Catholic Bishops. It reflects the essential character of Catholic schools as communities of learning where as an old friend wrote, "... God, God's truth and God's life are integrated into the entire syllabus, curriculum and life of the school."

Let us continue to grow together into Christ.

J. N. MacNeil
Archbishop of Edmonton
President, Alberta Bishops' Conference

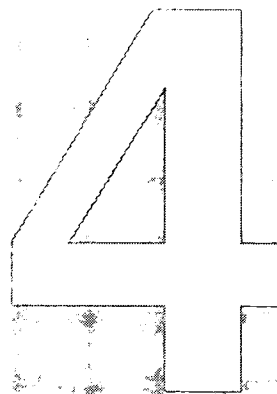
Introduction to the Grade 4 Handbook

This handbook provides parents with information about the Grade 4 curriculum—the knowledge, skills and attitudes students in Alberta are expected to demonstrate when they have completed the Grade 4 curriculum. It is based on the Alberta Education *Program of Studies: Elementary Schools*. The handbook includes samples of what students are expected to learn in each subject. The complete curriculum for Grade 4 is available in all Alberta elementary schools.

Introduction

TO THE ELEMENTARY SCHOOL CURRICULUM

Alberta Education specifies what all students in Grade 1 to Grade 6 are expected to learn and be able to do. The curriculum is organized into separate subjects or course areas and is designed to enable teachers to make connections across subjects, and to develop programming that accommodates a range of student needs. We expect that teaching methods and schedules will vary from school to school and from class to class to meet the diverse learning needs of students.



What Is Curriculum?

Curriculum describes what students are expected to learn. In Alberta, curriculum is developed by Alberta Education and is described in documents called programs of study for elementary, junior high and senior high schools.

The curriculum specifies what all students in the province are expected to learn in each subject area at each grade level. It is developed by Alberta Education in consultation with teachers, administrators, parents, representatives from post-secondary institutions, and professional and community groups.

Within the context of Catholic schools, the curriculum in all of its aspects—content, the teaching process, and the total school environment—reflects the values of faith, hope, charity, forgiveness and justice as found in the gospels and the message of Jesus Christ as understood by the Catholic Church.

Teachers are responsible for using the curriculum to plan their teaching activities and set appropriate levels of challenge according to students' learning needs and abilities. Teachers regularly assess student progress and report to parents, students and school administrators.

As well as being assessed by their teachers, students write provincial achievement tests in grades 3, 6 and 9. Grade 3 students write achievement tests in language arts and mathematics. Grades 6 and 9 students write achievement tests in language arts, social studies, mathematics and science. The results of these achievement tests are provided to school boards and schools. Parents may ask for their child's test results at their local school.

Information about provincial achievement testing in grades 3, 6 and 9 is provided in an Alberta Education publication called, *Parent Guide to Provincial Achievement Testing*. Individual guides for Grade 3 and for Grade 6 are available in elementary schools. The Grade 9 guide is available in junior high schools. The publications also may be obtained from Alberta Education's Student Evaluation Branch by calling 403-427-0010 or, outside of Edmonton, dial 310-0000 to be connected toll free.

In Catholic schools there are many opportunities for integrating gospel values and nurturing the presence of God in our midst within the curriculum. Teachers will determine where religious education and church teaching can be integrated with other subjects.

Religious Education



Religious education is an essential and integral part of the life and culture of a Catholic school. Through it, students are invited to develop the knowledge, beliefs, skills, values and attitudes needed to build a relationship with God and community through the person of Jesus Christ. Religious education shares the same goals and objectives set forth for all good education, that is, the growth and development of the whole person in all his or her dimensions—physical, intellectual, emotional, social and spiritual.

Religious education has four essential characteristics.

It is **Trinitarian**. It recognizes God as the creator of all things who gives us Jesus. It is Jesus who reveals God to us, and in turn reveals God's Spirit, through whom we understand our faith.

It is based on **Sacred Scripture** through which we hear the mystery of God revealed, the call to be in relationship with God and each other, and we learn how to pray.

It is based on the **life experience** of the students through which they are invited to discern signs of God in their daily lives.

It is presented within the tradition of the **Catholic faith community** which, based on Church teachings, sacramental and liturgical life, provides students with experiences of faith, prayer, love and justice.

With an awareness of the uniqueness of each student and a recognition that religious development takes place through a process of stages and within a community, it is expected that program presentation will vary from place to place to meet the diverse learning and religious formation needs of all students.

Religious Education Programs for elementary and junior high schools are authorized by the Bishop of the local diocese. Some school districts have developed supplementary resources and adapted the program to better meet local needs.

The Grade 4 Religious Education Program explores the experience of the Church handing on the Good News of Jesus in the written Gospel. Through the Gospel stories of those people who encountered Jesus, we explore the meaning of Jesus Christ for us today. In the Gospels we hear the invitation given by the Holy Spirit to be disciples and friends of Jesus. The tree stump is used as a symbol of Jesus to evoke many meanings throughout the program.

Students explore these themes through the study of 10 units:

Unit 1. The Church hands on the Good News.

As a new school year begins, the students experience the joy and enthusiasm of new beginnings. They enter into the story of the first Christian community through the Pentecost story. The students receive the gospel book and begin to learn how to use it. They begin to develop reverence for the Bible as the word of God.

Unit 2. The Good News about Jesus Christ.

The students hear how the first Christians were attracted to Jesus, how they came to understand who Jesus is, and how the Gospels came to be written down, and how the Holy Spirit keeps alive the memory of Jesus through the Church.

Unit 3. Jesus tells us about the reign of God.

The students meet Jesus the story teller, entering into and enjoying the parables: the Sower, the Pearl of Great Price and the Good Shepherd. Through these parables they hear about the reign of God and are invited to wonder and delight in God's unconditional love, especially as seen by people past and present.

Unit 4. A light shines in the darkness.

Through the message of John the Baptist the students explore their experiences of darkness and light. Advent is celebrated as a season of longing and waiting for the great light: Jesus Christ, God-with-us. The Jesse Tree introduces the ancestors of Jesus and invites the students to be rooted in the life of Jesus.

Unit 5. Jesus, "born of a woman."

The students celebrate and explore the humanity of Jesus through Mary and Joseph, Simeon and Anna. They reflect on the uniqueness of Jesus' relationship with God. The students explore the Jewish heritage of Jesus and begin to appreciate that, as a Jew, he was deeply shaped by his people's customs, culture and encounter with God.

Unit 6. Jesus reveals the compassion of God.

The students are invited to see and hear the healing, preaching and prayer of Jesus through which he reveals to us the power and compassion of God. They reflect on our call to participate in the building of the kingdom of God.

Unit 7. Jesus says, "I am the Way."

Through Jesus' conversations with Nicodemus, the Samaritan woman, and Philip, the students are introduced to new life and rebirth in Baptism and the Holy Spirit. Story and symbol evoke in the students trust in the action of the Holy Spirit and the desire of God to immerse each of us in love.

Unit 8. Jesus gives his life for us.

The students are invited to deepen their understanding of the death of Jesus as an act of forgiveness and love through the stories of the Last Supper and the Way of the Cross. They reflect on the Eucharist as an invitation to live a life of love and service.

Unit 9. "My Lord and My God."

The students share the joy of the disciples while reflecting on the meaning and mystery of the resurrection of Jesus. They come to recognize Jesus in our midst and see how we share the life of the Trinity.

Unit 10. Jesus' Spirit is with us.

The students discover how Jesus continues to transform and affect our lives through the power of the Holy Spirit. They recognize that through Baptism and Confirmation we are empowered by the Spirit of Jesus and in faith we are invited to continue the mission of Jesus.

The school, through the Religious Education Program, complements parents in their role as primary and principal educators of their children. Home and family play a vitally important role in the faith development of children. Within the family, seeds of faith are planted. Family relationships and daily experiences are major factors in shaping a child's values, attitudes and Catholic identity. Regular religious practice and the application of classroom learning to daily life are critical parts of religious formation.

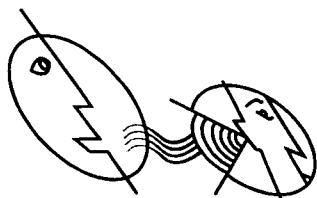
Prayer is an integral part of the Religious Education Program and of each school day since intimacy with God is the ultimate goal of Catechesis. Respecting the individual differences of children and our changing human needs, prayer is experienced in many different ways: silent reflection, guided imagery, scriptural prayer, ritual action, song and formal community prayer. The experience of classroom celebrations is an important component of the Grade 4 program. As we enter into prayer we give praise and thanks for God's loving presence, and call upon the Spirit to guide, nourish and empower our lives through Jesus Christ.

Teaching the sacraments occurs within each of the Religious Education Programs. Sacraments celebrate the presence of Christ in our lives. They are effective signs that make God's grace present to us in love, healing and the transformation of our lives. Eucharist and Reconciliation are an essential part of each child's religious formation and a necessary grounding for a mature faith. As with many basic themes, Eucharist and Reconciliation are introduced in Grade 1, but continue to be deepened and intensified in each year thereafter. Children who have not yet celebrated First Communion or First Reconciliation are always welcome to contact their parish to begin their immediate preparation for the sacraments.

The Religious Education Program interprets for the students what the Catechism of the Catholic Church teaches about our faith in a manner appropriate to the age and development of the students. Not everything in the Catechism is incorporated because, as the Catechism itself points out, what is taught must be adapted to the “differences of culture, age, spiritual maturity, and social and ecclesial conditions among all those to whom it is addressed” (#24). Specific excerpts are quoted at the end of each theme for the teacher to help root the contents and activities of the theme in Church tradition.

The Religious Education Program is structured around the church liturgical year. This enables students to live and express faith in an integrated way at school, at home and in the parish community.

Language Arts



Throughout elementary school, students are expected to use language to learn, and learn to use language. Language is an integral part of learning, and takes place in and across all subject areas. Student performance in all subject areas is influenced by competency in language arts.

As students move from grade to grade, they use the language skills they have already learned through reading, writing, listening, speaking and viewing to increase their knowledge and skills of language. Opportunities are provided for students to use those skills in a new context and with more challenging learning materials. In language arts, students will demonstrate increasing confidence and improve their abilities to use language to explore, construct and communicate meaning.

In a Catholic school, students are invited to consider how the knowledge, skills and values studied within the language arts curriculum are integrated with other subject areas, including religious education, and reflect the Catholic identity of the school.

By the end of Grade 4, students are expected to:

- produce sentences with subject–verb agreement and correct pronoun referents
- use punctuation to set out ideas in series or lists
- use paragraphs or quotation marks to indicate new speakers in written dialogue
- use a variety of clues, such as picture clues, context clues and illustrations, to predict the probable content or events in a variety of fiction and nonfiction text
- ask questions to extend their understanding of the concepts or ideas they are discussing or reading
- use text features, such as table of contents, chapter headings, index, glossary and bibliography to assist them as readers and writers
- understand the organization and structure of books, news reports and articles to assist them as readers and writers
- recognize that plot is the action of a story and is built around the main character(s) in a story
- recognize relationships among settings, events, characters and ideas in both fiction and nonfiction
- identify change or growth in fictional characters
- identify techniques used by authors to develop their readers' understanding of an insight into characters
- recognize the characteristics of biography, autobiography, historical fiction, science fiction, myth and poetry

- differentiate between important ideas and supporting details in their reading and listening
- summarize, from several sources, information and ideas on a particular topic
- determine the point of view presented by a speaker
- determine a writer's or speaker's purpose
- determine feelings or attitudes presented by a writer or speaker
- defend or support their opinions or interpretations of ideas encountered in their reading or listening
- paraphrase, elaborate or extend the ideas of others as part of a group setting
- develop criteria for assessing their effectiveness in presenting ideas or information
- judge the effectiveness of a presentation, according to a set of criteria
- respond to the writing of their peers, by commenting on elements of style, development, organization and style
- experiment with a variety of language formats
- use descriptive language to assist them in their reading, writing and talking
- focus their writing and speaking on a topic or theme, by connecting introduction, development and conclusion
- combine similar ideas within sentences, using joining words and appropriate punctuation
- use dialogue in their stories to advance the plot and develop character
- provide logical explanations or instructions related to concepts, ideas or processes
- publish their writing for known and unknown audiences.

Mathematics



Mathematics is a common human activity, increasing in importance in a rapidly advancing, technological society. A greater proficiency in using mathematics increases the opportunities available to individuals. Students need to become mathematically literate in order to explore problem-solving situations.

At all levels, students benefit from working with appropriate materials, tools and contexts when constructing personal meaning about new mathematical ideas.

The main goals of mathematics education are to prepare students to:

- use mathematics confidently to solve problems
- communicate and reason mathematically
- appreciate and value mathematics
- commit themselves to lifelong learning
- become mathematically literate adults, using mathematics to contribute to society.

As students acquire the specified outcomes, they will also be expected to use the following seven mathematical processes:

- Communication
- Connections
- Estimation and Mental Mathematics
- Problem Solving
- Reasoning
- Technology
- Visualization.

The mathematics content is organized into four strands:

- Number
- Patterns and Relations
- Shape and Space
- Statistics and Probability.

Number

By the end of Grade 4, students will:

- ◆ Demonstrate a number sense for whole numbers 0 to 10 000, and explore proper fractions.

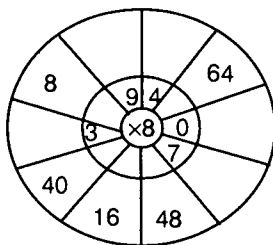
Sample Student Tasks

- Use words to write the number that is:
 - 150 less than 500
 - 275 greater than 450
 - 895 rounded to the nearest ten
 - 895 rounded to the nearest hundred.
- Let the base-10 flat represent one whole square. Use centimetre cubes to build a one-layer shape that is less than one whole square. Record your shape on cm grid paper. Write a fraction and a decimal to tell how much of the square is covered by your shape. Is not covered by your shape.

- ◆ Apply arithmetic operations on whole numbers, and illustrate their use in creating and solving problems.

Sample Student Tasks

- Each week day a mail truck leaves the city post office to deliver mail to our town. The distance to the city and back to our town is one hundred thirty-four kilometres.
Use base-10 blocks to show how you could represent the number of kilometres the mail truck travels each week.
Show how you might use numbers to calculate the total number of kilometres travelled in one week.
- Use a calculator to find two numbers whose product is 462. How many such numbers are there?
- Fill in the missing numbers.



- ◆ Use and justify an appropriate calculation strategy or technology to solve problems.

Sample Student Tasks

- Explain how you can find the answers to the following questions faster by using mental mathematics strategies rather than by using a pencil and paper algorithm or the calculator.
 $3 \times 204 = ?$
 $56 \div 9 = ?$

- ◆ Demonstrate an understanding of addition and subtraction of decimals.

Sample Student Tasks

- Show how you can solve the following problems, using base-10 blocks.
Diana bought a magazine priced at \$1.49 and a package of doughnuts priced at \$2.18. What was the total cost, before taxes?
Sam had a roll of paper 4.2 m long. After he cut off a piece to make a banner, there were 2.5 m left on the roll. How long was the piece he cut off?

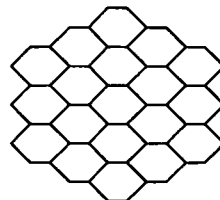
Patterns and Relations

By the end of Grade 4, students will:

- ◆ Investigate, establish and communicate rules for, and predictions from, numerical and non-numerical patterns, including those found in the community.

Sample Student Tasks

- Bees made a honeycomb. They started on day 1 with the middle cell. Each day they added another ring of cells all around the honeycomb. How many cells were there after the 7th day? What was the first day on which there were more than 1000 cells?



Shape and Space

By the end of Grade 4, students will:

- ◆ Estimate, measure and compare, using decimal numbers and standard units of measure.

Sample Student Tasks

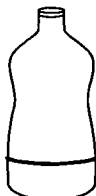
- Measure a variety of items in the room.
Make a list and record the measurements without the unit of measure. Exchange papers with a friend who must complete the list by adding the units; e.g.,
My pencil is 172 _____ long.
My book is 0.8 _____ thick.
Prepare a second list changing the unit of measure. For example, measure the pencil in mm, and write: "My pencil is 172 cm long." Leave out the decimal point. The friend must decide where to place the decimal point.
- The following plastic containers have elastic bands placed at different heights: a 750-mL cooking oil bottle, a 600-mL vinegar bottle, a 2-L drink bottle and a 1-L drink bottle. Estimate the number of mL needed to fill each container to the elastic band. Order your estimates. Find containers like the ones shown, and measure to check your predictions.



750 mL



600 mL



2 L



1 L

- Jill's great-grandmother was born in the first decade of the 20th century. What might have been her year of birth? Explain. The year 2001 will begin the 3rd millennium. Will you be living by the first year of the 4th millennium? Why or why not?

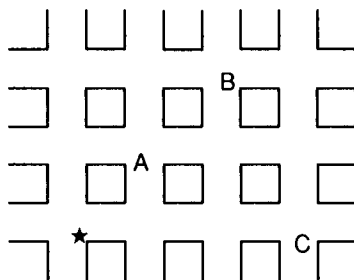
- ◆ Describe, classify, construct and relate 3-dimensional objects and 2-dimensional shapes, using mathematical vocabulary.

Sample Student Tasks

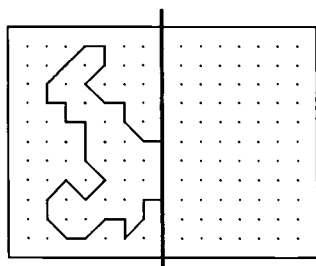
- Demonstrate each step of the following activity on a 5 by 5 geoboard. Record each step on geodot paper.
 - Outline the largest possible rectangle that is not square. Use an orange marker.
 - Identify the number of points touched by the outline. Colour them brown.
 - Place a geoband that is equal in length and perpendicular to a short edge but is not a line of symmetry. Use a yellow marker.
 - Place a geoband that is equal in length and parallel to a short edge but is not a line of symmetry. Use a blue marker.
 - Find a way to name and describe the location of the point where the perpendicular and parallel lines intersect. Colour it green.
 - What fraction of the whole rectangle is each outlined part?
- ◆ Use numbers and direction words to describe the relative positions of objects in two dimensions, using everyday contexts.

Sample Student Tasks

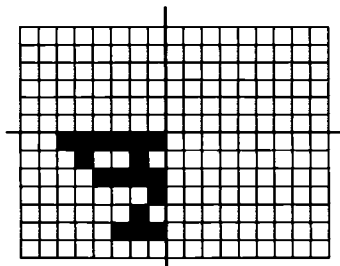
- On a simplified street map, locate special points of interest; e.g., store, school, mall, bridge; from a point of reference (home) ★. Describe the path from ★ to B, using directions, N, S, E, W.



- Complete each picture, using the lines of symmetry shown.



1 line of symmetry



2 lines of symmetry

Statistics and Probability

By the end of Grade 4, students will:

- ◆ Collect first- and second-hand data, assess and validate the collection process, and graph the data.

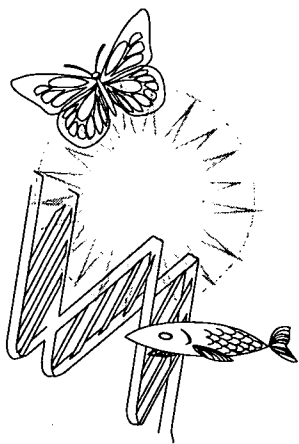
Sample Student Tasks

- A Grade 4 class wants to learn if more families make popcorn at home in the microwave than by any other method.
How might they word their question?
Whom should they survey? Why?
What method should they use to best keep their information organized? Explain with words and a drawing.
- ◆ Design and use simple probability experiments to explain outcomes.

Sample Student Tasks

- For each of the following, draw a spinner that matches the statement.
It is impossible to land on 5.
You are more likely to land on red than on green.
It is equally likely that the spinner will stop on red, yellow, blue or white.
You are certain to spin an even number.

Science



Learning about science helps students to understand and interpret the world around them. The purpose of the program is to encourage and stimulate children's learning by nurturing their sense of wonderment, by developing skill and confidence in investigating their surroundings, and by building a foundation of experience and understanding upon which later learning can be based.

In elementary science, students develop their skills of inquiry and problem solving. In science inquiry, the focus is on asking questions, exploring materials and finding answers based on evidence. In problem solving, the focus is on practical tasks—finding ways of making and doing things to meet a specific need, using available materials.

In a Catholic school, students are invited to consider how issues of stewardship, morals, ethics and Catholic teaching can be integrated appropriately into the science curriculum.

By the end of Grade 4, students are expected to:

- identify patterns and order in objects and events studied
- record observations, using pictures, words and charts, with guidance in the construction of charts
- make predictions and generalizations, based on observations
- investigate a practical problem, and develop a possible solution.

The science program also plays a role in the development of student attitudes. At all levels of the elementary science program, students are expected to demonstrate positive attitudes toward the study of science and the application of science in responsible ways.

Five topics are identified for Grade 4.

Waste and Our World

Students learn about wastes produced through natural processes and human technology. In studying natural systems, students learn that all plants, animals and other living things are made up of materials that are recycled through the environment again and again. In studying human consumption and wastes, students identify wastes produced within their community and learn the methods used for disposal. They learn that some waste materials are biodegradable, that some are reusable, and that others are toxic. They learn that personal action in reducing, reusing and recycling materials can help decrease the waste we accumulate.

By the end of Grade 4, students are expected to:

- recognize that human activity can lead to the production of wastes, and identify alternatives for the responsible use and disposal of materials.

Wheels and Levers

Students learn about basic components of simple machines: how they are assembled, how they operate, how they are used. Students explore different techniques that can be used to transfer motion from one component to another, using simple connectors and various levers, gears, pulleys and band driven systems. As they work with these components, they learn the functions that each can perform, including sample applications and ways that they can be used in a larger system. As part of their studies, they examine how these simple machines are used to change the speed or force of movement.

By the end of Grade 4, students are expected to:

- demonstrate a practical understanding of wheels, gears and levers by constructing devices in which energy is transferred to produce motion.

Building Devices and Vehicles that Move

Students apply simple techniques and tools in building devices and vehicles that move. In constructing these objects, students apply previous learnings and structures and explore new applications for wheels, rollers, gears, pulleys and a variety of levers and connectors. They learn that different forms of energy can be used to propel their model devices: in some cases, a direct push; in other cases, the stored energy from a compressed spring or falling weight. On completing their projects, students learn to evaluate their work, by describing the effectiveness of the device and the appropriateness of materials used.

By the end of Grade 4, students are expected to:

- construct a mechanical device for a designated purpose, using materials and design suggestions provided
- explore and evaluate variations to the design of a mechanical device, demonstrating that control is an important element in the design and construction of that device.

Light and Shadows

Students learn about light by studying the effects of light on things within their environment. They learn about light sources, about materials that light can pass through and about what happens when a material blocks or changes the path of light. By observing shadows and their motions relative to a light source, students discover that light and shadows fall along a predictable path. They discover that mirrors, prisms and a variety of other materials can affect that path by reflecting and refracting light and by splitting light into colours.

By the end of Grade 4, students are expected to:

- identify sources of light, describe the interaction of light with other materials, and infer the pathway of a light beam.

Plant Growth and Changes

Students learn about the structure and growth of plants by raising plants in the classroom and by observing plant growth within the community. They learn to recognize and describe different forms of leaves, stems, roots and flowers, and learn their functions in supporting the growth and reproduction of the plant. They learn various ways of starting new plants and the plants' requirements for growth. Through hands-on activities, students learn that different plants have different needs, and they gain skills and attitudes for their care.

By the end of Grade 4, students are expected to:

- demonstrate knowledge and skills for the study, interpretation, propagation and enhancement of plant growth.

Social Studies



In social studies, students develop the knowledge, skills and positive attitudes they need to be responsible citizens and contributing members of society. Students learn to acquire and evaluate information and ideas. They learn to interact with others and develop understanding and respect for people in Canada and other countries. The focus of the Grade 4 social studies program is Alberta—its geography and people, and the similarities between Alberta and Quebec.

In a Catholic school, students are invited to consider how issues of social justice, the contribution of the Church to community (locally and globally), and Church teaching can be integrated appropriately into the social studies curriculum.

Three topics are identified for Grade 4.

Alberta: Its Geography and People

Students learn about the geography of Alberta, including the regions and natural resources. Throughout the unit, emphasis is placed on the interrelationship between people and their environment, as well as the impact people have on their environment. Students examine how natural resources are used and the resulting impact on Albertans and the environment. The intent of the topic is to develop an increased sensitivity to the importance of using natural resources wisely.

By the end of Grade 4, students are expected to:

- understand that the environment can affect the way people live
- understand that our way of life and our environment are affected by the presence and use of natural resources
- understand that conservation is important to Alberta's future
- use and interpret aerial maps of Alberta
- make an outline map of Alberta, accompanied by symbols and a legend showing major cities, mountains and main rivers
- demonstrate concern for the needs and future of Albertans
- cooperate in efforts to conserve natural resources.

Alberta: Its People in History

Students learn about the people who have contributed to Alberta's history and development, beginning with the original inhabitants and tracing the origin of people in Alberta's history. This topic focuses on the lives of Albertans through case studies of a Native community, a fur trading settlement and one or more of:

- a homestead settlement (1890 – 1939)
- immigration of a specific group into a specific area (1880 – 1930)
- the Great Depression (1929 – 1939)
- World War II (1939 – 1945)
- boom years (1947 –).

The intent of this topic is to show students that a changing world often results in a changing lifestyle.

By the end of Grade 4, students are expected to:

- understand that contact between the Natives, the fur traders and the settlers in Alberta's history brought changes to their lifestyle
- understand that Albertans have been affected by historical events
- understand that Albertans, throughout the history of Alberta, have contributed to its development
- use historical maps and map legends to locate the territories occupied by different Native tribes, major fur trading posts and communities being studied
- identify how events in Alberta's history affected the lifestyle of Albertans
- appreciate the contributions made by many people/groups in Alberta's history
- appreciate and tolerate the decisions made by Albertans in different times and under different circumstances.

Alberta: A Comparative Study with Quebec

Students learn about the similarities between Alberta and Quebec. Geography, resources, occupations, leisure activities, language and customs are compared in the study, but the main emphasis is on people. The links that exist between the provinces, as well as the contributions of Albertans and Quebecois to the Canadian way of life, are examined. The intent of the topic is to develop an awareness of Canada as a bilingual country, and to develop understanding, appreciation and increased sensitivity to another region of Canada that has similarities and differences.

By the end of Grade 4, students are expected to:

- understand that there are similarities and differences between Alberta's and Quebec's geography and lifestyle
- understand that Canada is a bilingual country
- understand that Quebecois and Albertans have contributed to the Canadian way of life

- use maps of Canada to find Alberta's location relative to Quebec and the other provinces
- express ideas on the similarities and differences between Alberta and Quebec
- appreciate the many similarities and differences shared by Canadians
- appreciate the bilingual nature of Canada.

Learner Outcomes in Technology

Alberta Education has prepared a framework of technology outcomes that students should achieve by the end of grades 3, 6, 9 and 12. Implementation of the technology outcomes will occur in September 2000. These outcomes are intended to be integrated in a variety of existing programs, such as English, mathematics, science and social studies. The information and communication technology outcomes that have been developed are considered basic knowledge and skills that all students will need as they progress through their schooling and in the future for preparation for further study or the workplace.

Physical Education



Physical education programs foster active, healthy lifestyles that enable students to recognize the importance of accepting responsibility for their physical, social and emotional well-being. Students in a well-balanced physical education program are provided with learning opportunities in seven dimensions of activity: physical fitness, games, gymnastics, dance, outdoor pursuits, aquatics, and track and field. The expectations for physical education are generally the same for students in grades 4, 5 and 6. Students are expected to demonstrate increased levels of performance over the three years.

Physical Fitness

Students are expected to:

- understand the effects of exercise on major muscles, bones and joints
- learn to assess personal fitness levels
- experience success and enjoyment through participation in physical fitness activities.

Games

Students are expected to:

- move into spaces to avoid others
- understand the difference between offence and defence
- cooperate in partner and small group situations.

Gymnastics

Students are expected to:

- stretch and curl the body when moving or balancing
- understand safety principles as they apply to gymnastic activity
- appreciate the performance of self and others.

Dance

Students are expected to:

- participate in a variety of rhythmic dance forms
- understand personal space and general space
- appreciate the aesthetics of dance.

Outdoor Pursuits

Students are expected to:

- apply and extend basic movement skills in outdoor pursuits
- understand applications of orienteering skills, such as using a compass to determine direction
- enjoy participation in outdoor games that require minimal organization.

Aquatics

Students are expected to:

- improve physical fitness through vigorous aquatic activities
- understand safety principles as they apply to activities in, on or near water.

At least one exposure to a swimming and water safety program is required during the elementary years.

Track and Field

Students are expected to:

- throw small objects for distance
- understand the basic techniques applied to running, jumping and throwing events
- demonstrate responsibility and cooperation through involvement in the track and field program.

Health



Health education fosters the growth of knowledge, skills, attitudes and lifelong behaviours that will enable the student to assume responsibility for healthful living and personal well-being. The curriculum is organized around themes: self-awareness and acceptance, relating to others, life careers, body knowledge and care, and human sexuality. Parents decide if their child will participate in classes about human sexuality.

In a Catholic school, these themes are taught within the context of the teachings of the Catholic Church. The local boards of many Catholic school districts have approved supplementary resources and adapted the curriculum to better meet the needs of their students, their families and their faith communities.

The child abuse prevention unit is an optional part of the health program. If this unit is offered in the school, parents decide if their child will participate.

Self-awareness and Acceptance

Students learn to consider and appreciate their self-worth and the self-worth of others. They learn about human emotions and positive ways of expressing them. They also learn about personal characteristics and how their personal actions and decisions influence their relationships with others.

By the end of Grade 4, students are expected to:

- recognize that self and others change in many ways
- recognize that all feelings and emotions are normal and can be good
- learn the good and bad characteristics of personality.

Relating to Others

Students learn to appreciate the qualities of others. They learn how to develop and maintain healthful relationships, and they understand the importance of healthful relationships with others at school.

By the end of Grade 4, students are expected to:

- learn why everyone needs friends
- appreciate the needs of a new student.

Life Careers

Students learn to recognize their abilities and the abilities of others, and to understand the importance of work, occupations associated with work, and activities that help them prepare for work.

By the end of Grade 4, students are expected to:

- recognize the importance of sharing time and talents with others
- understand that career development is a lifelong process.

Body Knowledge and Care

Students learn the structure, function and development of the body, and appreciate the importance of good nutrition to good health. As well, students appreciate factors that contribute to healthful growth, understand how sickness and disease can be prevented, understand safety practices, and appreciate threats and aids to personal health and safety in their community.

By the end of Grade 4, students are expected to:

- recognize that teeth should last a lifetime
- identify nutritious foods
- understand the structure and function of the skin, hair and nails
- differentiate between prescription and nonprescription drugs
- identify people who could help a child who is being abused
- accept responsibility for disposing of wastes in appropriate receptacles.

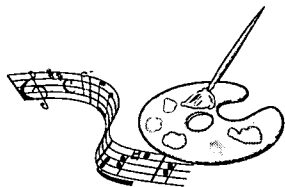
Human Sexuality

Students are expected to understand the structure and function of the reproductive system, and to understand puberty and its associated changes. As well, they are expected to understand how human life is created. This unit is addressed within the context of Catholic teaching.

By the end of Grade 4, students are expected to:

- learn that puberty brings body changes, including secondary sex characteristics
- understand the basic function of reproduction.

Fine Arts



In a Catholic school, students are invited to consider how the knowledge, skills and values studied within the fine arts curriculum can be used to understand the religious dimensions of art, liturgy, music and history. They are also used directly to enhance the religious and spiritual culture of the school, and to celebrate the various liturgical feasts of the year.

Art

In the art program, students are expected to learn visual arts skills and concepts to interpret and communicate with visual symbols, to appreciate the cultural aspects of art, and to relate art to everyday life. The art curriculum has four major components:

- reflection** – responding to visual forms in nature and designed objects
- depiction** – developing imagery based on observations of the visual world
- composition** – organizing images and their qualities in the creation of works of art
- expression** – using art materials to make a meaningful statement.

Students are expected to:

- analyze forms they see in nature and in man-made objects
- develop their own images of things that they see or imagine
- organize the images that they create
- use a variety of art materials
- use art for different purposes; for example, to illustrate stories, design fabrics and sculpt
- understand the contribution of art to our environment.

Drama

Drama is an optional program designed to be used as a separate subject or integrated with other subjects. In the drama program, students are expected to develop a positive self-concept by assuming other roles and acquiring dramatic skills. Eleven forms of dramatic expression are common components of an elementary drama program. The dramatic forms of expression include dramatic movement, mime, choral speech, storytelling, dramatization, puppetry, choric drama, readers' theatre, story theatre, playmaking and group drama.

Students are expected to:

- develop flexible, free and controlled movement
- learn to express themselves physically and imaginatively through movement and gesture
- recognize and reproduce the sounds of standard speech
- learn concepts of pitch, pace, pause, rate, intensity and volume
- accept role playing as a positive learning experience
- apply dramatization skills to puppetry by creating a character for a puppet
- speak with energy
- speak with an appreciation of the voice as an instrument
- develop appreciation for enjoyment of literature
- develop the ability to create a dramatic story
- cooperatively build a drama to solve problems.

Music

In the music program, students are expected to develop an enjoyment of music, an understanding of a variety of music styles and an insight into music through meaningful musical activities, such as attending a concert or playing a musical instrument. The music program is developed around the concepts of rhythm, melody, harmony, form and expression. These concepts are learned through participating in six skill areas: listening, moving, singing, playing instruments, reading and writing, and creating.

By the end of Grade 4, students are expected to:

- identify the four families of musical instruments (strings, woodwind, brass and percussion)
- identify introductions, interludes and codas
- use planned body movements to illustrate rhythmic and/or melodic patterns
- sing two- and three-part rounds and descants
- respond to changes in tempo, dynamics and mood while singing
- demonstrate skills on many instruments; for example, autoharp, Latin instruments, ukuleles, handbells and strings
- recognize sixteenth notes and rests

- develop skill in writing rhythm patterns
- create introductions, interludes and codas for songs
- create new music.

Languages Other Than English

French as a Second Language



In Alberta, French as a Second Language (FSL) is a program in which the French language is taught as a subject, often between 20 and 40 minutes a day, to help students develop communication skills, language knowledge and cultural awareness in French.

Depending upon a school board's language policy, French as a Second Language in elementary schools may be offered as an optional program or it may be a compulsory program. School boards may begin the program at different grade levels, since the program is based on developing language proficiency over a grade or grades without being grade specific. Many schools start the elementary program in Grade 4.

The program is designed to teach students how to understand what they hear and read in French, and to communicate their ideas orally and in written form, using an approach that is based on real-life experiences and situations. Students will also acquire knowledge about local, provincial and national francophone groups to become more aware of their presence and to better understand them. Students learn the French language vocabulary and grammar through thematic activities and projects that are related to real-life language experiences. At the same time, students are taught specific language learning strategies that will help them become better second language learners.

The program is organized into three language proficiency levels—Beginning, Intermediate and Advanced. Each of these proficiency levels is then further divided into three sublevels. In elementary schools, students start at the Beginning Level and progress through the Beginning 1, Beginning 2 and Beginning 3 sublevels. It could take students one or more school years to reach a particular language proficiency level, depending upon when the students start the program and how much time is given to French instruction in the school.

The language content is based upon the concrete experiences of elementary students. These experiences provide a real-life context for understanding ideas in French and for communicating similar ideas. Each level has its own set of experiences that fall into the following areas:

Beginning 1

- School
- People Around Us
- Weather
- Animals
- Holidays and Celebrations

Beginning 2

- Community
- Clothing
- Exercise
- Food
- Housing

Beginning 3

- Activities
- Vacations
- Fine Arts
- Trades and Professions
- Hygiene and Safety

As students work through these experiences, they develop their ability to understand and communicate in French. At the end of each level, the students must demonstrate the following knowledge and skills:

Beginning 1

The ability to understand simple ideas contained in listening texts, such as the temperature in a weather forecast.

The ability to talk about concrete ideas, using simple sentences to identify, list or describe people, places or things, and to ask simple questions. For example, students could talk about their family by naming the members of the family, giving their ages and birthdays.

Beginning 2

The ability to understand simple ideas contained in listening texts, such as understanding directions to the corner store, and to understand simple reading texts, such as understanding the main food items on a menu.

The ability to talk and write about concrete ideas, using simple sentences to identify, list or describe people, places or things, and to ask simple questions. For example, students could provide their address, telephone number and order pizza over the telephone. They could also write a simple note to describe their house to a pen pal.

Beginning 3

The ability to understand simple ideas contained in listening texts, such as a recorded message of flight departure times, and to understand simple reading texts, such as the safety rules on a safety week poster.

The ability to talk and write about concrete ideas, using a number of simple sentences to identify, list or describe people, places or things, ask simple questions, give information and simple advice. For example, students could telephone a travel agency to ask for prices for different travel destinations. They could also write a simple announcement for the school's Night of Music concert to promote it in the community.

Once students have attained a Beginning Level 3 language proficiency, they then move into the next proficiency level, which is Intermediate Level 4.

French Immersion

French immersion is a program in which French is the language of instruction for a significant part of the school day. This program is designed for students whose first language is not French. Several subjects, or possibly all of them when students are in grades 1 and 2, are taught in French. The curriculum is identical to that offered in the regular English program. The major difference is that it is taught in French.

In addition to learning what is identified for courses such as mathematics, science and health, French immersion students also want to acquire full mastery of the English language, functional fluency in French, as well as an understanding and appreciation of the French culture. Graduates of a French immersion program are able and willing to participate with confidence and competence in French conversations on a variety of topics. Should they so wish, they are able to take further education as appropriate to their abilities and interests with French as the language of instruction. Finally, they are able to accept employment where French is the language of work.

French immersion students perform well in all subject areas on system-wide and provincial tests. This finding has been replicated many times not only in Alberta but across Canada.

A guide for parents of students in French Immersion, *Yes, You Can Help*, is available for purchase from the Learning Resources Distributing Centre at 403-427-2767 or, outside of Edmonton, dial 310-0000 to be connected toll free.

Native Languages

Blackfoot and Cree language and culture programs are designed to enable students to learn Native languages and to increase awareness of Native cultures.

Students are expected to:

- learn basic communication skills in Blackfoot or Cree
- develop cultural sensitivity and enhance personal development
- develop originality and creativity
- develop a desire to improve their competency in Blackfoot or Cree.

Ukrainian

The Ukrainian bilingual program is designed for native speakers of Ukrainian and for students who speak other languages and wish to learn Ukrainian.

Students are expected to:

- obtain specific information from teacher-selected sources
- recognize how to express personal feelings, ideas and opinions
- organize and present, effectively, information of interest to their peers
- share feelings; share and support ideas and opinions
- respond personally to a variety of literary forms
- use literature and other art forms to reflect creatively upon experiences of general interest
- recognize and be sensitive to differences or similarities in cultures
- recognize the contribution of the lifestyle of Ukrainians to the wider community.

In a Catholic school, both within the Religious Education Program and along with the study of the Ukrainian language, many aspects of the life and faith of the Ukrainian Catholic Church are studied and celebrated.

Other Languages

Locally developed language courses are available for Arabic, Cantonese, German, Hebrew, Mandarin, Polish and Spanish. Contact your school board office for information about which language programs it offers.

Feedback

Curriculum Handbook for Parents: Catholic School Version

Grade 4

We would like to know what you think about this handbook. Are you a:

- ☐ Parent
- ☐ Teacher (please indicate level) ☐ Division 1, ☐ Division 2, ☐ Division 3
- ☐ School Administrator (please indicate level) ☐ Division 1, ☐ Division 2, ☐ Division 3
- ☐ District Administrator
- ☐ Other (please specify) _____

1. I found this document:

- ☐ extremely useful
- ☐ useful
- ☐ somewhat useful
- ☐ not very useful.

2. What could be done to make this document more useful?

3. Other comments and suggestions:

Thank you for your feedback.

Please send your response to:

Director, Curriculum Standards Branch

Alberta Education

11160 Jasper Avenue

Edmonton, Alberta, Canada

T5K 0L2

Fax: 403-422-3745

moving

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

[illegible]This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement (OERI)
Educational Resources Information Center (ERIC)



NOTICE

REPRODUCTION BASIS



This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.



This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").

PS 026846